

CLAIMS

1. A COFDM demodulator including:

a fast Fourier transform circuit (14) analyzing a received signal in a window corresponding to one symbol, each symbol carrying several phase and amplitude modulated carriers, some of which (P), shifted in frequency in a predetermined way from one symbol to the next one, form pilots;

a bidimensional filter (18) for interpolating, from anchors (A) corresponding to the pilots such as received from several consecutive symbols (S), the distortion undergone by each carrier; and

means (12) for correcting the window shifting with respect to an optimal position;

characterized in that it comprises means (42) for correcting each distortion according to window shifting corrections performed respectively for the symbol associated with the distortion and for the symbols associated with the anchors used to interpolate the distortion.

2. The demodulator of claim 1, characterized in that the means for correcting the window shifting include a phase-locked loop (40) synchronized on a correlation signal (C) obtained by a correlation product between the received signal and this same signal delayed by one symbol, each symbol being preceded by a guard interval (G) corresponding to a copy of the end of the symbol.

3. The demodulator of claim 1, characterized in that each distortion is, in the frequency field after Fourier transform, a weighted sum of two anchors of same position in a preceding symbol and in a following symbol, to which anchors have been added respective phases corresponding to the shiftings undergone by the analysis window for the preceding and following symbols, and to which anchors has been subtracted a phase corresponding to the shifting undergone by the analysis window for the symbol associated with the distortion.

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